SCINTILLATOR ARRAYS FOR RADIATION DETECTORS AND METHODS OF MANUFACTURE

ABSTRACT OF THE DISCLOSURE

A method for fabricating a scintillator array for a radiation detector of an imaging system includes fabricating a scintillator array including a plurality of scintillators arranged side by side, each of the scintillators separated from adjacent scintillators such that a gap is defined therebetween, each of the scintillators having a geometric shape defined by a plurality of external surfaces, fabricating a pre-formed reflector having a plurality of cavities defined therein, each cavity having a geometric shape substantially similar to each scintillator geometric shape, and coupling the scintillator array and the pre-formed detector such that each respective scintillator is positioned at least partially within at least one respective reflector cavity.